We claim:

1. A clonal myeloma cell line capable of:

   growing continuously in a chemically defined medium;

   growing to high cell density in a chemically defined medium;

   remaining viable after cryopreservation in the absence of serum; and

   detectably expressing recombinant protein following genetic manipulation and culture in a chemically defined medium.

2. The cell line of claim 1 derived from $Sp_{2/0}$ myeloma cells.

3. The cell line of claim 2 wherein the cell line is C463A cells.

4. The cell line of claim 1 derived from Ag653 myeloma cells.

5. The cell line of claim 4 wherein the cell line is C504A cells.

6. The cell line of claim 1 wherein the genetic manipulation comprises introducing a nucleic acid encoding at least one protein into the cell line by electroporation, lipofection, calcium phosphate precipitation, polyethylene glycol precipitation, sonication, transfection, transduction, transformation or viral infection.

7. The cell line of claim 1 wherein the protein is selected from one or more of the group consisting of an immunoglobulin, a cytokine, an integrin, an antigen, a growth factor, a cell cycle protein, a hormone, a neurotransmitter, a receptor or fusion protein thereof, a blood protein, an antimicrobial, any fragment thereof, and any structural or functional analog thereof.

8. The cell line of claim 5 wherein the immunoglobulin or fragment is selected from one or more of the group consisting of rodent, primate, chimeric, and engineered.

9. The cell line of claim 6 wherein the immunoglobulin or fragment is selected from one or more of the group consisting of murine, human, chimeric, humanized, CDR-grafted, phage displayed, transgenic mouse-produced, optimized, mutagenized, randomized, and recombined.

10. The cell line of claim 7 wherein the immunoglobulin or fragment is selected from one or more of the group consisting of IgG1, IgG2, IgG3, IgG4, IgA1, IgA2, slgA, IgD, IgE, and any structural or functional analog thereof.

11. The cell line of claim 7 wherein said fragment is selected from one or more of the group consisting of $F(ab')_2$, Fab', Fab, Fc, Facb, pFc', Fd, Fv, and any structural or functional analog thereof.

12. The cell line of claim 1 wherein the protein is produced at about 0.01 mg/L to about 10,000 mg/L of culture medium of said cell line.

13. The cell line of claim 1 wherein said protein is produced at a level of about 0.1 pg/cell/day to about 100 ng/cell/day.

14. A method for producing at least one protein from a cultured cell comprising the steps of:

culturing cells of the cell line of claim 1 in a chemically defined medium, wherein the cells express said at least one desired protein; and

isolating said at least one desired protein from the chemically defined medium or the cells.

15. An isolated protein obtained from cells according to the method of claim 12.

16. A method for identifying cell lines capable of growing continuously in a chemically defined medium comprising the steps of:

culturing cells from one type of cell line in at least one type of chemically defined medium, wherein the cultured cells from one type of cell line are not known to grow in the chemically defined medium; and

selecting spontaneous mutant cells that are capable of growing in the chemically defined medium.

17. A cell line obtained according to the method of claim 14.

18. A protein obtained from the cell line of claim 1.

19. The cell line of claim 5 wherein said immunoglobulin is infliximab.

20. The cell line of claim 5 wherein said immunoglobulin is rTNV148B.

21. The cell line of claim 5 wherein said fragment is abciximab.